

Amendments To The Specification

Paragraph beginning at page 6 line 7 has been amended as follows:

The fin actuator section **10** has a means **100** operatively configured for rotating a power shaft (means for rotating) **100**, preferably a reversible electric motor, and a power shaft (not shown), that is the motor's output shaft. The means for rotating 100 is mounted in an actuator housing 200, thereby constraining the rotating means from free movement. The power shaft is fixed to a threaded lead screw **120**, preferably by means of a set screw coupler **110**. The lead screw **120** has a lead nut **130** that traverses along the lead screw in response to the rotation of the lead screw **120**. The lead screw **120** is lubricated to enable the lead nut **130** to move smoothly. By rotating the lead screw **120** in forward and reverse directions the lead nut **130** moves in opposite linear directions along the length of the lead screw **120**, thus converting the rotational movement of the power shaft to linear movement. The lead nut **130** is operatively coupled to a crank arm **150** having slots **154** in such a way as to allow it freedom of movement without substantially contributing to the total backlash. Preferably the lead nut **130** includes fixed pins **140** on each side (bottom pin not shown) which slide into the slots **154** of the crank arm **150**. The pins **140** serve to both restrain the lead nut **130** in the crank arm **150**, and as the structural component used to transfer the torque to the crank arm **150**. The crank arm **150** turns in relation to the movement of the lead nut **130**, thereby converting linear movement to the rotational movement of the fin shaft **160**. The crank arm **150** is rigidly attached to the fin shaft **160** thereby the fin shaft **160** is rotated with the rotation of the crank arm **150**, adjusting the fin (not shown) on the outside of the missile according to the guidance system.

The Abstract beginning at page 15 line 2 has been amended as follows:

~~The present invention relates to a novel A~~ fin actuator for a portable missile and a method of using the same. One aspect of the present invention includes a fin or wing actuator that meets very strict criteria to fit within a compact, portable missile while substantially limiting backlash. Another aspect of the present invention is a method of fin actuation in a portable missile while substantially limiting backlash.

Paragraph beginning at page 3 line 14 has been amended as follows:

An In an embodiment of the present invention a fin actuator(s) in a portable missile that substantially limits backlash includes a means for rotating a power shaft operatively configured to rotate the power shaft in a forward direction and a reverse direction; a means for converting the rotational movement of the power shaft to linear movement, including a lead screw fixedly coupled to the power shaft with a lead nut threadingly engaged and moving linearly along the lead screw in relation to the direction of rotation of the power shaft; and a means for converting the linear movement of the lead nut to rotational movement of a fin shaft, including the lead nut operatively coupled to a crank arm fixedly coupled to the fin shaft, effecting the rotation of the fin shaft according to the linear movement of the lead nut.